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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/509,493	09/29/2004	Takenobu Arima	L9289.04158	5357

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STEVENS DAVIS MILLER & MOSHER, LLP  
1615 L STREET, NW  
SUITE 850  
WASHINGTON, DC 20036

EXAMINER
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BROOKS, SHANNON

ART UNIT	PAPER NUMBER
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2617

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	04/04/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/509,493

Applicant(s)

ARIMA ET AL.

Examiner

Shannon R. Brooks

Art Unit

2617

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 29 September 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 September 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. **Claims 1-7, and 10-11** are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoylar (US 6590890 B1) in view of Mandyam (US 6931256 B2).

Consider **Claim 1**, Stoylar teaches a scheduling apparatus which creates a schedule for a base station apparatus to transmit packet data on a common channel to one or more communication partners, said scheduling apparatus comprising: a detecting section that detects changes in corresponding transmission path conditions (**Col. 4, lines 7-67, Col. 5, lines 1-67, and Col. 6, lines 1-25**); and a scheduling section

that determines order in which to transmit packet data based on the changes in said transmission path conditions (**Col. 4, lines 47-67, Col. 5, lines 1-67, and Col. 6, lines 1-25, and Figs. 1 and 2**).

Stoylar teaches receiving and does not specifically and definitively teach detecting. However, Mandyam teaches detecting (**Col. 5, lines 38-49**).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to incorporate the teaching of Mandyam into Stoylar in order to allow measurement through a detector (**Col. 5, lines 38-49**).

Consider **Claim 11**, Stoylar teaches a schedule creating method which creates a schedule for a base station apparatus to transmit packet data on a common channel to one or more communication partners, said method comprising: detecting changes in corresponding transmission path conditions **Col. 4, lines 7-67, Col. 5, lines 1-67, and Col. 6, lines 1-25**); determining order in which to transmit packet data based on the changes in said transmission path conditions; and transmitting the packet data according to said transmit order(**Col. 4, lines 47-67, Col. 5, lines 1-67, and Col. 6, lines 1-25, and Figs. 1 and 2**).

Stoylar teaches receiving and does not specifically and definitively teach detecting. However, Mandyam teaches detecting (**Col. 5, lines 38-49**).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to incorporate the teaching of Mandyam into Stoylar in order to allow measurement through a detector (**Col. 5, lines 38-49**).

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Consider **Claim 2**, Stolyar teaches the scheduling apparatus, wherein said scheduling section determines an order at which to transmit packet data to be retransmitted, from a corresponding transmission path condition (**Col. 3, lines 51-67, Col. 4, lines 1-67, and Cols. 5-8**).

Consider **Claim 3**, Stolyar teaches the scheduling apparatus, wherein said scheduling section determines an order at which to transmit packet data to be retransmitted within a specified time (**Col. 3, lines 51-67, Col. 4, lines 1-67, and Cols. 5-8**).

Consider **Claim 4**, Stolyar teaches the scheduling apparatus, wherein said scheduling section creates a schedule to transmit packet data earlier to a communication partner whose transmission path condition changes rapidly and later to a communication partner whose transmission path condition changes slowly (**Col. 6, lines 3-14**).

Consider **Claim 5**, Stolyar teaches the scheduling apparatus, wherein said scheduling section does not take into account change in a transmission path condition when determining order in which to transmit packet data if the change in the transmission path condition is more rapid than a predetermined speed (**read as a scaled delay related to fast6 and slow fading, Col. 6, lines 3-24**).

Consider **Claim 6**, Stolyar teaches the scheduling apparatus, wherein said detecting section detects change in a transmission path condition by measuring a Fading Doppler frequency (**Col. 4, lines 47-64**).

Consider **Claim 7**, Stolyar teaches the scheduling apparatus, wherein said

detecting section detects change in a transmission path condition by measuring change in receive quality of a signal transmitted from a communication partner (read as carrier-to-interference ratio, **(Col. 6, lines 3-35)**).

Consider **Claim 8**, Stoylar teaches a control station apparatus comprising: a scheduling apparatus **(Col. 3, lines 51-67, Col. 4, lines 1-67, and Cols. 5-8.)** ; except that it does not specifically teach a transmit section that transmits packet data according to a schedule created by said scheduling apparatus.

However, Wei teaches a transmit section that transmits packet data according to a schedule created by said scheduling apparatus **(Pg. 3, [0028]-[0029] and Fig. 2)**.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to incorporate the teachings of Wei into Stoylar in order to allow adjustments of data rates and scheduling **(Pg. 3, [0030])**.

Consider **Claim 9**, Stoylar teaches a base station apparatus comprising: a scheduling apparatus **(Col. 4, lines 65-67, Col. 5, lines 1-67, and Col. 6, lines 1-14)**; except that it does not specifically teach a transmit section that transmits packet data according to a schedule created by said scheduling apparatus.

However, Wei teaches a transmit section that transmits packet data according to a schedule created by said scheduling apparatus **(Pg. 3, [0028]-[0029] and Fig. 2)**.

Therefore, it would have been obvious to one skilled in the art at the time of the invention to incorporate the teachings of Wei into Stoylar in order to allow adjustments of data rates and scheduling **(Pg. 3, [0030])**.

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Consider **Claim 10**, Stoylar teaches a communication system comprising: a scheduling apparatus (**Col. 3, lines 51-67, Col. 4, lines 1-67, and Cols. 5-8**).

3. **Claims 9 and 10** are rejected under 35 U.S.C. 103(a) as being unpatentable over Stoylar (US 6590890 B1) in view of Mandyam (US 6931256 B2) and further in view of Wei (US 2003/0204615 A1).

### ***Conclusion***

Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shannon Brooks whose telephone number is (571) 270-1115.

The examiner can normally be reached on Monday - Friday, 8:00 a.m. - 5:00 p.m., EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nick Corsaro can be reached on (571) 272-7876. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Shannon R. Brooks

March 30, 2007

  
NICK CORSARO  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600